

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) An electrolytic processing apparatus comprising:
a substrate holder for holding a substrate;
an electrode base provided with a ~~electrode member~~ plurality of electrode members for ~~contact with~~ contacting and processing a surface of the substrate, held by the substrate holder, in the presence of a liquid to effect processing of the substrate; and
a support base for floatingly supporting the electrode base by a floating mechanism.
2. (Currently Amended) The electrolytic processing apparatus according to claim 1, further comprising:
a stopper for limiting the movements of the electrode base in a direction away from the support base and in a direction parallel to the support base.
3. (Currently Amended) The electrolytic processing apparatus according to claim 1, wherein the floating mechanism ~~supports the electrode base floatingly by~~ includes an elastic body interposed between the electrode base and the support base for floatingly supporting the electrode base.
4. (Currently Amended) The electrolytic processing apparatus according to claim 1, wherein the floating mechanism ~~supports the electrode base by the pressure of a fluid enclosed within~~ includes a pressure chamber formed between the electrode base and the support base, and the pressure chamber being surrounded by an elastic membrane enclosing a fluid for exerting pressure to support the electrode base.
5. (Currently Amended) The electrolytic processing apparatus according to claim 4, wherein further comprising a device for supplying the fluid at a predetermined pressure is supplied into the pressure chamber.

Claim 6 (Cancelled).

7. (Original) The electrolytic processing apparatus according to claim 1, wherein the electrode member includes an electrode to be connected to a power source, and an ion exchanger or a scrubbing member covering the surface of the electrode.

8. (Currently Amended) An electrolytic processing apparatus comprising:
a substrate holder for holding a substrate;
~~an a plurality of electrode member members for contact with contacting and processing a surface of the substrate, held by the substrate holder, in the presence of a liquid to effect processing of the substrate; and~~
~~an a plurality of electrode support base bases, each for floatingly supporting a respective one of the electrode member members by a floating mechanism.~~

Claim 9 (Cancelled).

10. (Currently Amended) The electrolytic processing apparatus according to claim 8, further comprising:

a stopper for limiting the movements of ~~each of the electrode member members~~ in a direction away from the electrode support base and in a direction parallel to the electrode support base.

11. (Currently Amended) The electrolytic processing apparatus according to claim 8, wherein the floating mechanism ~~supports the electrode member floatingly by~~ includes an elastic body interposed between the electrode member and the electrode support base ~~for floatingly supporting the electrode member.~~

12. (Currently Amended) The electrolytic processing apparatus according to claim 8, wherein the floating mechanism ~~supports the electrode member by the pressure of a fluid enclosed within~~ includes a pressure chamber formed between the electrode member and the electrode support base, and ~~the pressure chamber being surrounded by an elastic membrane enclosing a fluid for exerting pressure to support the electrode member.~~

13. (Currently Amended) The electrolytic processing apparatus according to claim 12, wherein further comprising a device for supplying the fluid at a predetermined pressure is supplied into the pressure chamber.

14. (Currently Amended) The electrolytic processing apparatus according to claim 8, wherein each of the electrode member members includes an electrode to be connected to a power source, and an ion exchanger or a scrubbing member covering the surface of the electrode.

15. (Currently Amended) An electrolytic processing apparatus comprising:
a substrate holder for holding a substrate;
a plurality of electrode members for contact with contacting and processing a surface of the substrate, held by the substrate holder, in the presence of a liquid to effect processing of the substrate;
a floating mechanism for floatingly supporting the electrode members; and
an adjustment member for floating a part of the plurality of electrode members selectively or changing the elasticity, which is generated by the floating mechanism, of a part of the plurality of electrode members.

16. (Currently Amended) The electrolytic processing apparatus according to claim 15, wherein the electrode members include at least one feeding electrode member for feeding electricity to the substrate, the adjustment member is provided to a being operable to selectively float or change the elasticity of the at least one feeding electrode member for feeding electricity to the substrate.

17. (Currently Amended) The electrolytic processing apparatus according to claim 15, wherein each of the electrode member members includes an electrode to be connected to a power source, and an ion exchanger or a scrubbing member covering the surface of the electrode.

18. (Currently Amended) An The electrolytic processing apparatus according to claim 8, further comprising:
a substrate holder for holding a substrate;

~~an electrode member for contact with the substrate, held by the substrate holder, in the presence of a liquid to effect processing of the substrate;~~

a drive mechanism for moving the substrate, held by the substrate holder, and the ~~electrode member members~~ relative to each other; and

a guide member disposed around the substrate holder and having an outwardly-extending tapered guide surface which, upon the relative movement between the substrate and the ~~electrode member members~~, comes into contact with the upper surface of the ~~electrode member members~~ and guides the ~~electrode member members~~ to a contact position at which the ~~electrode member makes members make~~ contact with the substrate.

Claim 19 (Cancelled).

20. (Currently Amended) ~~An~~ The electrolytic processing apparatus according to claim 8, further comprising:

~~a substrate holder for holding a substrate;~~

~~an electrode member for contact with the substrate, held by the substrate holder, in the presence of a liquid to effect processing of the substrate;~~

a drive mechanism for moving the substrate, held by the substrate holder, and the ~~electrode member members~~ relative to each other; and

a guide member disposed around the substrate holder and having a contact surface which comes into contact with the ~~electrode member members~~ outside the substrate;

wherein the contact area of the ~~electrode member members~~ with the guide member and the substrate is constant.

Claim 21 (Cancelled).

22. (Currently Amended) The electrolytic processing apparatus according to claim 20, wherein the ~~electrode member is provided in numbers, and the~~ an outer shape of the guide member is similar to the outer shape defined by the ~~electrode members~~ which are in contact with the substrate held by the substrate holder.

23. (Currently Amended) An electrolytic processing method comprising:
bringing a substrate into contact with an electrode member mounted on a
floatingly-supported electrode base in the presence of a liquid; and
while the substrate is in contact with the electrode member in the presence of the liquid,
moving the substrate and the electrode member relative to each other, thereby processing the
surface of the substrate.

24. (Original) The electrolytic processing method according to claim 23, wherein the
electrode member includes an electrode to be connected to a power source, and an ion exchanger
or a scrubbing member covering the surface of the electrode.

25. (Currently Amended) An electrolytic processing method comprising:
bringing a substrate into contact with a floatingly-supported electrode member in the
presence of a liquid; and
while the substrate is in contact with the electrode member in the presence of the liquid,
moving the substrate and the electrode member relative to each other, thereby processing the
surface of the substrate.

26. (Original) The electrolytic processing method according to claim 25, wherein the
electrode member includes an electrode to be connected to a power source, and an ion exchanger
or a scrubbing member covering the surface of the electrode.

27. (Currently Amended) An The electrolytic processing method according to claim 23,
further comprising:

~~bringing a substrate, held by a substrate holder, into contact with an electrode member in
the presence of a liquid while moving the substrate and the electrode member relative to each
other; and~~

~~bringing the~~ an upper surface of the electrode member into contact with a guide surface of
a guide member disposed around the substrate to guide the electrode member to a contact
position at which the electrode member makes contact with the substrate held by the substrate

holder, during the relative movement between the substrate and the electrode member, thereby processing the surface of the substrate.

Claim 28 (Cancelled).

29. (Currently Amended) ~~An~~ The electrolytic processing method according to claim 23, further comprising:

~~bringing a substrate, held by a substrate holder, into contact with an electrode member in the presence of a liquid while moving the substrate and the electrode member relative to each other; and~~

~~bringing the electrode member into contact with a contact surface of a guide member, disposed around the substrate holder, such that the contact area of the electrode member with the contact surface and the substrate is constant.~~

Claim 30 (Cancelled).

31. (Currently Amended) The electrolytic processing method according to claim 29, wherein the electrode member is ~~provided in numbers~~ one of a plurality of electrode members for contacting the substrate, and the outer shape of the guide member is similar to the outer shape defined by the electrode members which are in contact with the substrate held by the substrate holder.

32. (Currently Amended) ~~An~~ The electrolytic processing apparatus according to claim 14, comprising:

~~an electrode section provided with an electrode member including an electrode and an ion exchanger covering a surface of the electrode;~~

~~a holder for holding a workpiece, capable of bringing the workpiece close to or into contact with the ion exchanger of the electrode member; and~~

~~a power source to be connected to the electrode of the electrode member of the electrode section; wherein at least an edge portion of the surface, facing the workpiece substrate, of the electrode is made round.~~

33. (Currently Amended) An electrolytic processing apparatus comprising:
an electrode section ~~provided with~~ having an electrode member including an electrode
and an ion exchanger covering a surface of the electrode;
a holder for holding a workpiece, the holder being capable of bringing the workpiece
close to or into contact with the ion exchanger of the electrode member; and
a power source to be connected to the electrode of the electrode member of the electrode
section;
wherein an insulator is interposed between the ion exchanger and the surface, facing the
workpiece, of the electrode.

34. (Original) The electrolytic processing apparatus according to claim 33, wherein the
electrode and the insulator are formed integrally.

35. (Currently Amended) An electrolytic processing apparatus comprising:
an electrode section ~~provided with~~ having an electrode member including an electrode
and an ion exchanger covering a surface of the electrode;
a holder for holding a workpiece, the holder being capable of bringing the workpiece
close to or into contact with the ion exchanger of the electrode member; and
a power source to be connected to the electrode of the electrode member of the electrode
section;
wherein the ion exchanger comprises an ion exchanger to be close to or in contact with
the workpiece, and at least one other ion exchanger, and the electrode and the ion exchanger to
be close to or in contact with the workpiece are at least partly insulated from each other by an
insulator.

36. (Original) The electrolytic processing apparatus according to claim 35, wherein the
insulator is interposed between an edge portion of the surface, facing the workpiece, of the
electrode and the ion exchanger to be close to or in contact with the workpiece.

37. (Previously Presented) The electrolytic processing apparatus according to claim 35,
wherein the electrode and the insulator are formed integrally.

38. (Currently Amended) An electrolytic processing apparatus comprising:
an electrode section provided with having an electrode member including an electrode
and an ion exchanger covering a surface of the electrode;
a holder for holding a workpiece, the holder being capable of bringing the workpiece
close to or into contact with the ion exchanger of the electrode member; and
a power source to be connected to the electrode of the electrode member of the electrode
section;

wherein the ion exchanger comprises an ion exchanger to be close to or in contact with
the workpiece, and at least one other ion exchanger, and the ion exchanger to be close to or in
contact with the workpiece and the at least one other ion exchanger are at least partly insulated
from each other by an insulator.

39. (Original) The electrolytic processing apparatus according to claim 38, wherein the at
least one other ion exchanger, except its surface facing the workpiece, is surrounded integrally by
the insulator.